

### **Abstract of the Disclosure**

A submarine launched expendable radio navigation system (SSXRN) buoy method and apparatus. According to one embodiment, a method for determining a submarine geographic position using a SSXRN buoy system is disclosed. The method comprising launching a radio navigation-enabled buoy and recording a launch time and DRNS submarine position. The method further comprises recording a buoy breach time and searching for radio navigation RF signals. Then, recording a radio navigation position acquisition time and an initial radio navigation position. Further, recording a subsequent radio navigation position data and a subsequent time. Moreover, determining a DRNS correction factor using a DRNS position error, a buoy drift, radio navigation position data and DRNS position data. In addition, estimating the submarine geographic position using the DRNS correction factor and a DRNS geographic position. In another embodiment, a SSXRN buoy system is disclosed.